



1

#813
(we)
Sub Spec
4-29-03
slw

RECEIVED
APR 18 2003
GROUP 3600

Patent application of

Annop Mageess

for

**COMBINATION LIFTING, PLATFORM, HANDTRUCK, SCAFFOLD,
FLOORJACK AND MECHANIC' CREEPER**

RELATED APPLICATION

Reference is made to my provisional application no. 60/228577

Filed 8/29/2000 entitled "Combination Lifting and Cart"

BACK GROUND OF INVENTION

Field of invention

This invention relates in general to a multi-use portable lifting, and more specifically, the invention discloses how a portable lifting can be converted into a tilt back hand truck, a regular hand truck, a scaffold, a floor jack or a mechanic' creeper.

Do Not
Enter
Sub Spec
7/14/03
BAA

Description of prior art

Various combination of lifting and moving devices have been known in the past.

U.S. patent 4,258,826 to Murray, discloses a hand cart that can be converted to a stepladder and further disclosing a winch type that can raise a load to a higher level.

U.S. patent 3,751,058 to Lasen discloses a combination snow shovel, wheel barrow and dolly.

U.S. patent 6,173, 811 to Dean Tonabene, discloses a combination hand truck, stepladder and basket carrier.

U.S. patent 6,189,653 to Laug Horst discloses a multi-purpose scaffold.

U.S. patent 4,494,626 to Dale a. ast discloses a combination stepladder and hand truck apparatus.

U.S. patent 4,488,326 to Chales w. chery, discloses a pallet dock lift.

What is needed is a combinations lifting, platform, tilt back hand truck, scaffold, floor jack and mechanic' creeper. None of the above patents describe the present invention.

Objects and advantages

(a) One object of this invention is to provide a combination lifting, platform, tilt back hand truck, work bucket, scaffold and a mechanic's creeper apparatus which is readily convertible from a compact lift table structure into a rigid multipurpose tool structure.

(b) To provide the combination of tools simple inexpensive to manufacture to operate and maintain.

- (c) To provide a closure which can be used by consumers, without special tools or training.
- (d) To provide a tool that can complete work from start to finish with out the need to transfer the load from one device to another that may cause injury.
- (e) To provide a closure which can be achieved by consumers without the use of a big vehicle to delivery a load because this invention is compact and light weight, using only a small amount of storage compared to the previous product. This invention can help consumers and business' save money which would other wise be spent on the high cost of gasoline.
- (f) A combination where all the loads are rest on an extensible device and front scissor legs. When the lift table is elevated then the load will rested on scissor legs which provide different functions from previous inventions.
- (g) Another object of this invention is having a new and novel combination lift to provide a table, tilt-back and hand truck which can be delivered from the ground. Both load and combination lifting platform are made at different levels ; such as a truck, dock and roof with out using high cost dock or, fork lifts. By converting and transferring the weight from the lift table to the position to the tilt-back six-wheeler (climb up) then it continues moving the load all the way in side the truck bed where the folk lift is unable to reach.
- (h) A combination support plate, provides a pivotally inserted support plate member which normally carries a load when used as a hand truck. It can move upward.

and lock in place providing a compact structure for storage. It can also be suspended and lowered to the ground, docked and used as a platform. Unlike the other previous product this mechanism can be used as a scaffold, work bucket and can also be used as a creeper or floor jack.

(I) Another advantage of this invention is the lift assembly mechanism that can be folded for more compact and coupling to the rear portion of the lift table. Providing the maximum lowest point to the ground. Also the support plate can be put in lower position and converted to get to the platform making it possible to roll the load in and out also when attach with the hand crank pusher wheel, the platform and support plate can move slidable beneath many stacks of boxes in one pass.

(j) It can be elevated to the desired high using the support plate which picks up the load from the truck or dock.

(k) To provide a lighter product in weight than what already is known by using a light weight swivel wheels which can be rotated and used as a stop instead of using the lower frame assembly. The scissor legs are made of steel or aluminium square tubing instead of heavy steel bars using the combination extended legs help the scissor legs only when needing more strength for lifting on heavier loads.

(l) Provide multiple function attachments which can be coupled, using the same coupling device such as pockets, brackets and locking pins.

(m) The scaffold and stepladder provide lifting loads, for tools, lumber, heavy loads and work inside or outside the building. It is convenient when used with a remote control and tilted parallel with the ceiling, roof, pole, or work place for more convenient functions.

(n) A work bucket can carry liquids, rocks and sand. It can be lowered to the ground and roll in and out a load also elevating tilting and dumping the load.

(o) Further objective and advantages is to make it easier for the user to carry and transport cargo when the structure is in the hand truck position.

(p) A mechanic's creeper can be tilted enabling a labourer to work face down and closer to the work place. It can be elevated and lowered to access work places that are hard to reach.

(q) A mechanic's creeper works as seat to support a worker, an upright, or set tool box at the same time. It also elevates a tool box to the desired level for working conditions.

(r) Another advance is the floor jack, which loads or unloads automotive parts, large size spare tires and raise and align the vehicle at the same time.

(s) It supplies an incline for fast convenient loading and unloading with less effort.

(t) Using only a single lift drive for tilting, lifting, lowering and declining with an additional hydraulic device or other drive/control devices.

Drawing figures

FIG. 1A is a side elevational view of the lift table in accordance with this invention it is shown in a lowered transport condition with an extensible device attached to the lower cross bar and platform;

FIG. 1B is a side elevational view of the lift table in an elevated position;

FIG. 1C is a left end view of the right shown in FIG. 1A;

FIG. 1D is a left end view of the right shown in FIG. 1B;

FIG. 1E is a removed sectional view of the extensible device;

FIG. 1F is a side view of manually a hand crank lift assembly;

FIG. 1G is a side view of the hydraulic lift assembly;

FIG. 1H is a side view of the embodiment of FIG. 1G, showing a hydraulic lift assembly in a lowered position;

FIG. 1I is a top view of FIG. 1B in its elevated position;

FIG. 1J is an enlarged partial sectional view of the support plate, also a support plate channel taken along the line 1J--1J in FIG. 1I;

FIG. 1K is an enlarged partial sectional view of the support plate channel locking mechanism take along the line 1K--1K in FIG. 1I;

FIG. 1L is an enlarged partial sectional view of the support plate and support plate locking mechanism take along the line 1L--1L in FIG. 1I;

FIG. 1M is an enlarged partial section view of the support plate and support plate channel take along the line 1M--1M in FIG. 1I;

FIG. 1N is a partial exploded perspective view of a combination of extended legs and reinforce legs with wheel assembly;

FIG. 1O is a partial exploded perspective view of a combination extended legs and reinforce legs with a cross bar;

FIG. 1P is an enlarged partial view of the swivel wheels assembly taken along the line 1P--1P in FIG. 1I;

FIG. 1Q is a sectional view of the swivel wheels assembly taken along the line 1Q--1Q in FIG. 1P;

FIG. 1R is an enlarged partial section view the pivot pin assembly taken along the line 0

IR--IR in FIG. 1A;

FIG. 1S is a sectional view of the pivot pin assembly taken along the line IS--IS in FIG. 1R;

FIG. 1T is a is an enlarged partial sectional view similar to FIG. 1M except it is showing the support plate in the lowered to the floor level;

FIG. 2A is a side view of the lift table in accordance with the invention is shown in a lowered. transport condition with a removable extensible device attached to an upper cross bar and platform cross frame;

FIG. 2B is a side elevtional view of the lift table in an elevated position;

FIGS. 2C through 2F are side views of the lift table with an extensible device, showing it's use thereof;

FIG. 3A is a side view of the lift table shown lowered to the floor level and lifting stackers;

FIG. 3B is a side view of the lift table in an elevated position;

FIG. 3C is a side view of the hand crank pusher wheel;

FIG. 3D is shown in the hand truck usage condition or standard two wheeler;

FIG. 4A is a side view of the lift table in use as a stepladder;

FIG. 4B is a side view of the lift table in use as a scaffold;

FIGS. 5A and 5B are views of the lift table in use as a work bucket;

FIGS. 6A and 6B are side views of the lift table in use as a mechanic's creeper;

FIGS. 6C and 6D are side view and top view of the lift table in use as a floor jack;

Summary of invention

The object of this present invention is to provide a combination lifting, platform, tilt back hand truck, scaffold, work bucket, floor jack, and mechanic' creeper. It is readily convertible from a lift table into a tilt back hand truck, or readily convertible from a lift table to a scaffold or readily convertible from a scaffold to any of the above mentioned functions with out the need to transfer the load between operation.

The present invention provides pocket, bracket, extension legs, extensible device and pin holes to couple a variety of different devices to achieve different function results. In this new product it provides a function that uses both the lift table aspect and the modified or added on function aspect to provide results superior to the sum of using separate devices to perform the two functions. When perform in two functions or more than two function, such as provide a tilt back hand truck which can be delivered from the ground both load and combination lifting platform it self to different levels such as a truck bed by converting and transferring weight from lift table position to support plate or tilt back six wheeler. Then convert to hand truck two wheeler and continue to move the load all the way inside the truck bed. All of this on the same modified lift table and without the need for transfer of the load from one device to another device. without additional hydraulic cylinders or other drive/control devices.

Description-Figs.1 to 6D

FIGS. 1B and 1D. depicts a scissors-type hydraulic-driven or screw thread-driven, liftable 10. Two pair of scissor legs 15a, 15b, 15c, 15d, made of steel or aluminium tubing are mounted at first end, e.g., using pivot pin 16a, 16b, (between the cross bar 42d) to both sides of platform cross frame 17a, 17b, and pivot to both front wheel 18a, 18b, (between the cross bar 42c) to lower portion of the scissor legs. The upper support frames include the platform cross frame 17a, 17b, and deck 11. The opposite ends of the scissor legs are coupled to both rollers 16c, 16d and swivel wheels assembly 18c, 18d, FIG. 1P to lower portion of scissor legs part of scissor motion described below, are free to move along horizontal surfaces of wheel 18a, 18b, swivel wheels 18c, 18d, FIG. 1P. The first pair of scissor legs 15a, 15b pivotally coupled

defining a scissor pivot pin 12a (pivot axis) and the second pair of scissor legs 15c, 15d are pivotally coupled at the same axis pin 12b. A drive or motive device such as a hand operated hydraulic pump or other control may be provided for extending or retracting the hydraulic cylinder 13 and cylinder rod 14. Other drive or motive devices are screw thread -driven which may be hand cranked, powered by electric hand drill or powered by electricity or air. Energy for screw thread-driven may be provided from an on-board battery and /or from electric power via a cable (not shown). Optionally, a switch or other control may be provided such as remote control (not shown).

In the depicted embodiment, the hydraulic cylinder 13 is pivotally coupled at one end to pivot pin 29 and the lift arm 23, extending between the ball joint 26 and cross bar bracket 34d. Mounted at the center of cross bar 42b connected to the scissor legs 15a, 15d and pivot pin 25 (pivot axis) mounted to lift arm 22 and pivotally coupled at the opposite end, to the lift arm 22, extending between, The ball joint 24 and cross bar bracket 34c are mounted at the center of lower cross bar 42a and connected to the scissor legs 15b, 15c and pivot pin 25 (pivot axis). When the hydraulic cylinder 13, cylinder rod 14 and support rod 27 are extended they cause lift arms 22 and lift arm 23 to spread apart pushing the cross bar 42b and deck 11 upward as in FIGS. 1B, 1D and 1G. When the hydraulic cylinder 13 is retracted it causes the lift arm 23 to lower the rear deck cross bar 41 and the platform assembly. Best seen in FIGS. 1H and 3A.

In the depicted embodiments of FIGS. 1A and 1B the rear deck cross bar 41 is attached to bracket 55a, 55b by welding and is pivotally attached at one end to an extensible rod 50 and the extensible device 40 by locking pin 54 inserted to holes 200a 200b 200c 200d. The extensible device 40 is rested on bracket 51 and attached by locking pin 53a to cross bar 42a.

causing the front cross bar 42d and support plate channel 43 or pivot pins 16a,16b (FIG. 1A) are mounted to the upper end of scissor legs 15b, 15c to tilted and lowered best seen in FIG. 1A tilt-back-six wheeler position. Also when elevated, the lift table 10 provides lifting and tilting at the same time as lowering the lift table 10 provides tilting and lowers lift table 10. The lift table 10 can be used as a number of function, such as a tilt back hand truck, as a inclined lift table 10 as a portable loading dock and also used as a transporting cart. The device can be used to load and unload boxes, plywood, glass, table and office partition also can be pushed by hand. The handrails 420a, 420b may be used for securing the load from falling best seen in FIG. 4B. For unloading the load from lift table 10 to van or truck adjust the extensible rod 50 a little higher than van or truck. To provide an incline for deck 11 then release the securing deck pin 221 with attach to bracket 220 welded to crossbar 42b then unlock the support plate channel lock 61 kick the support plate 49 to lowered position so that it rests on the van bed and moves the load over the approach ramp from deck 11 to the van is also using a minimum afforded and man power. When unloading from van to lift table 10, adjust extend leg 72a, 72b, (FIG. 1N) higher than rear deck 11 to provide an incline, then rest the support plate 49 on the van bed or truck bed. Then move the load to lift table 10 and lower it to convert to tilt-back position. Then lift crossbar 42a or step on support plate 49 and convert to hand truck position FIG. 3D. Then move load off the support plate 49. The extensible device 40 can be folded-in and out between extensible rod 50. Micro adjust-stop pin 52 to precise height or angle. Convert from tilt-back position to platform position (FIG. A1), to provide an incline to quickly roll loads on and off. To use as a t-bar dolly by attach to bracket 44 to locking pin 303. It can be also used as a hand crank wheel pusher 48 (FIG. 3A), (FIG. 3C) or electric wheel pusher (not shown).

In the embodiment of FIG. 1F, The screw thread-driven lift assembly. The ball joint 38b is welded to the left portion of the lift arm 32a. The right side of the lift arm 32a is attached to the folding support arm 33 which is attached to holes using bolt and nut 130a, 130b on both sides which are also attached to the stop pin 36a, 36b, in the slot 37a, 37b. Both sides to permit movement configuration support arm 33, possibly restrained by stop pin 36 (lift arm 32a and support arm 33 are the same axis). The lift arm 32a is pivotally attached to the right side of lift arm 32b by bolt and nut 34a, 34b, (pivot axis) and the left side of lift arm 32b is welded to ball joint 38a. A nut 121 attached is welded to the upper center of bracket 122 and pivotally attached to top edge. Both sides of lift arm 32b using a bolt and nut 123a, 123b, 124a, 124b FIG. 6D,. A threaded shaft 39 is attached between nut 121 and hand crank gear assembly. When cranked, 125a is rotated, which causes lift arm 32a 32b to spread apart and raise the lift table 10 or drawn together causes to lower the table. The hand crank assembly included gear bracket 126 is provided with coupling hole 131. Threaded Shaft 39 is welded to gear 129a by welded. Holes 127a, 127b provided for shaft 125b, is welded to gear 129b. The hand crank 125a is coupled to shaft 125b and joint 125c. The gear bracket 126 is attached between the top edge of the folding support arm 33 to pivot attached by nuts and bolts 134a, 134b, 134d, 134f.

the depicted of embodiment of FIG. 1I, the construction of the lift table 10 which includes a flat loading surface, or deck 11, may be made from wood, steel, fiberglass with or without a rough surface. The deck 11 is support by a plurality of cross bars 17, 41, 19a, 19b, 19c support plate channel 43 longitudinal platform cross frames 17a, 17b and brackets 55a, 55b provided with select holes 200a, 200b, 200c, 200d, located between cross bar 19a and rear deck cross bar 41. The platform is secured by pin 221 and secure bracket 220 which is

403a, 403b, 403c, 403d for stepladder 400a and pockets 405a, 405b, 405c, 405d, for rails 420a, 420b. There are holes 601a, 601b, for head rest 600 and pockets 403a, 403b, can be used for work bucket 500.

Lift table 10 includes a pivoted combination support plate 49 FIGS. 1J, 1K, 1L, 1M and 1T. It can be removed from the support plate channel 43 by pressing on support plate channel lock 61 is mounted to support plate channel 43 by bolt 60 causing the spring 68 to collapse and remove the support plate 49. On first and second end the support plate 49 included support plate rods holder 63a, 63b, be attached by clamps 64a, 64b, are welded to support plate 49. also stop 66a, 66b, ^{welded} to support plate 49 and spring 65a, 65b, are spacing between rod holder 63a, 63b, and stop 66a, 66b. To remove support plate 49 completely from support channel 43. ^{1.} Then press rods holder 63a, 63b, and remove support plate 49 from support channel 43 FIG. 1J. The support plate 49 can be swung upwardly when the lift table 10 is being transported or stored. The support plate 49 can be lowered, for engagement with the floor or dock as ^{an} a approach lamp FIGS. 1T and 3A. The lift table 10 can be suspended in its lowered position by engagement with a stop 70, or shoulder welded to support plate 49 in FIGS. 1T and 3A. The support plate 49 can be raised in to the elevated position, and lock in to support plate channel 43 as seen in FIG. 1B. It is also can be used as a standard hand truck, two-wheeler or tilt-back six-wheeler when support plate 49 is locked in to channel 43 FIGS. 1A, 1L, and 1M. The support plate 49 is available in different sizes and some make for work bucket (not shown).

In the embodiments depicted in FIGS. 1N and 1O are a combination extend legs are provided for the coupling to lift table 10 by extending legs 72a, 72b, 72c, 72d. By inserting

the scissor legs are also included with an adjust-stop pin 81a, 81b, 81c, 81d. For adjusting high to extended legs 72a, 72b, 72c, 72d, they are provided with holes 80a, 80b, 80c, 80d, 80e, 80f, 80g, on each of the extended legs the extend legs and reinforce available in different range and sizes .

In FIGS. 1N and 1O, cross bar 73a, are coupled by welding the wheels to support the shaft mounted to wheels members 75a, 75b, (Only the cross bar 73a is equipped with wheels). Cross bar pockets 74a, 74b, 74c, 74d are coupled by welding the top of cross bar 73a, 73b. Cross bar pockets 74a, 74b, 74c, 74d are included with locking pins 77a, 77b, 77c, 77d. They are inserted with lift table 10 scissor legs to extend legs 72a, 72b, 72c, 72d, and insert extend legs to cross bar pockets 74a, 74b, 74c, 74d. Then press locking pins 77a, 77b, 77c, 77d, to seated holes 79a, 79b, 79c, 79d, with the locked cross bar 73a, 73b,. The extend legs 72c, 72d and cross bar 73b when attached together can be used as a stop. They help to prevent lift table 10 from rolling away. It also can be extended to elevate one end of the lift table 10 provides an incline roller for fast load or unload and for reinforcing tubular legs. The extend legs 72a, 72b, 72c, 72d, and crossbar 73a, 73b, can be remove, insert or extend when the lift table 10 in lower position.

In the embodiments depicted in FIGS. 1P and 1Q, the swivel wheels assembly 16a, 16b, are located on both side of lift table 10. They includes brackets 90a, 90b, 91a, 91b, and hub 86a, 86b. They are welded together as shown, with shaft 85a, 85b, then welded to lower end of scissor legs 15b, 15c, and attached to hub 86a, 86b. The swivel wheels 84a, 84b, 84c, 84d are mounted to brackets 90a, 90b, using nuts 88a, 88b, 88c, 88d, and bolts 87a, 87b, 87c, 87d. (The swivel wheels help cut down on weight instead of using the lower frame with the wheels assembly) Wheels may be made of rubber alike or steel. The swivel wheels assembly

16a, 16b can be rotated 180 degrees to provide a stop, preventing the lift table 10 from rolling away.

In the embodiments depicted in FIGS. 1R and 1S, a pair of pivot pins 12a, 12b, (12b shown in FIG. 1C) are the center of hinges 102a, 102b. They are welded to the lower portion of scissor legs 15a, 15d. The pivot pins 12a, 12b are welded to the lower portion of the scissor legs 15b, 15c, bolt by nuts 104a, 104b, caused the pivot axis to be at a lower portion of the scissor legs. It provided space for extend legs 72a, 72b, 72c, 72d, made it possible to insert in square tube help reinforced the scissor legs 15a, 15b, 15c, 15d,.

In the embodiments depicted in FIGS. 2A and 2B, the rear deck cross bar 41 is mounted with brackets 55a, 55b and locking pin 54 is extended to pivot at one end of the extensible rod 50 extensible device 40 (FIG. 1E) rests on bracket 51b, locking pin 53b and cross bar 42b. The upper end of the scissor legs 15a, 15d, (FIG. 1A, extensible device 40 rested on cross bar 42a). When the lift table 10 raised, the angle of support plate 49 and deck 11 rotated forward and upward at the time which was defined by the angle and extended device 40. By selected holes 200a, 200b, 200d, 200d, on brackets 55a, 55b (200d it tilt or declines more than 200a). The extensible device 40 can be adjusting adjust-stop pin 52 to extend the extensible rod 50 used as a tilter device or incline device.

In the embodiments of FIGS. 2C, 2D, 2E, 2F, the side view of the tilt-back six wheeler, two wheeler hand truck and the elevation of the lift table 10. It shows the show thereof, as it can be used to load and unload box 201 from the truck bed 200.

FIG. 2C. shows the lift table 10 lifting and transporting box 201, from the truck bed

wheeler also can transferred the weight box 201 to the truck bed 200. The safety lock 202 is pivotally attach to the truck bed, Using safety lock 202 attach to the support plate 49, sets to prevent the support plate 49 from sliding away or tilting. Then rotate hand truck around safety lock 202 between loading platform or dock to truck rear end loading platform. FIG. 2E, shows the lift table 10 is extended to scissor legs and wheels assembly 16a, 16b, 18a, 18b. It also transforms lift table 10 back to tilt-back position. It will rest on the support surface, releasing safety lock 202, then stepped on to the cross bar 42a. On heavier loads it prevents lift table 10 from the tilting use of the extending legs 72a, 72b. With the cross bar 73a move forward can pass the center gravity of the load and move the lift table 10 away from the truck bed 200. Then lowering the lift table 10 to a tilted back position, the lift table 10 secured in the desired angle. FIG. 2F shows the lift table 10 is lowered in transporting. To load box 201 and lift table 10 on the truck 200, reverse the procedure (2F, 2E, 2D, 2C,). Support plate safety lock being selected from vise grip lock, foot control lock, remote control lock, wire pulling lock and automatic self locking alike.

In the embodiment depicted in FIG. 3A, shown in lift table 10 is shown lowered to floor level. The support plate 49 is removed from the support plate channel 43 and lowered, for engagement with the floor, as seen in FIG. 1T. The extensible device 40 is attached to the hand crank pusher wheel. In FIG. 3C, the locking pin 303 is mounted to bracket 44, with the locking pin 303 or locking pin 53a (bracket 51). In such a manner that cranking the extensible device 40 causes the lift table 10 and support plate 49 to move forward in relation to the floor. Then it is able to lift many stags of boxes 301 in one pass. In the embodiment of FIG. 3B, shown in lift table 10, an elevated position. It is ready to tilt and unload boxes 301 as near to a truck or van, an elevated loading dock, tilting table or loading pallet with out the equipped fork device. It is can be angle raise similar to FIG. 6A. 6B.

In the embodiments depicted in FIGS. 3A and 3C. The hand crank pusher wheel is comprised of a wheel 310 welded to one side of the center gear 309 and attached to the wheel support 320 by the locking pin 303. On the upper portion of the wheel support 320, provided with a pocket 316 hole and a locking pin 321 attached to extensible device 40. A pair of springs 318a, 318b, are hooked to the lower edge of the select lever 314 by hole 319. The opposite end is hooked to a one way push mechanism 340. Both end are hooked to holes 317a, 317b. The wheel support 320 is provided with pivot pin 313 and attaches to a one way mechanism 340 and pivot pin 315 to the select lever 314. When pushing the select lever 314 to the left it will cause the spring 318a to pull the one way the push mechanism 312 is to tilted and lower to the right side and locking on center gear 309 in such a manner, that when cranking extensible device 40 to the left it causes wheel 310 to rotate clock wise in one way so as to reverse push select lever to the right side and crank extensible device 40 to right. It is can be set up and operate angle lift similar to FIGS. 6A, 6B.

In the embodiment depicted in FIG. 3D shown in the hand truck usage condition or standard two wheeler. The support plate 49 locked in support plate channel 43. This achieves a minimum width thereof between the rearward surfaces of the wheel member 18a, 18b witch can be stored in a minimum amount of space. The hand truck can be stored in car trunk or used in side home and transform to step ladder FIG. 4A or scaffold FIGS. 4B, 2A and 2B,.

In the embodiments depicted in FIGS. 4A and 4b lift table 10 is used as a scaffold and a stepladder in position. Stepladder 400a, is coupled to lift table 10 by coupling ends 402a, 402b by insert in the upper deck pockets 403a, 403b, 403c, 403d. The stepladder 400b is coupled to lift table 10 by coupling end 402c, as seen in FIG. 11 and 1T. They are inserted in

degrees, as floor stop set to prevent a roll away. The ladders 400a, 400b can be stored below the deck 11 FIG. 4B. The lift table 10 is used as a scaffold that positions extended legs 72a, 72b, 72c, 72d. Inserted to scissor legs 15a, 15b, 15c, 15d and cross bar 73a, 73b, they are attached to the extended legs (FIGS. 1N, 1O,). A pair of hand rails 420a, 420b are coupled to the lift table 10 by coupling ends 404a, 404b, 404d, 404e,. Insert in pockets 405a, 405b, 405c, 405d respectively are shown in 1I.

The device can be used in a number of functions, such as a portable loading dock, for overhead maintenance repair, lifting loads, tools, and lumber. The operator may stand on the deck and ride it up to the proper elevation. Either while under the control of an assistant or a control by the operator as he rides (a remote control device not shown). The deck can be tilting parallel to the ceiling, roof, pole or work piece for more convenient repair. Another possible use is the telescopic supports that in sure adaptation to any standing surface contour. Extensible and retractable climb-through apertures at the end of the deck 11 permit the safe access to the scaffold movement surface.

In the embodiments depicted in FIGS. 5A, and 5B, the work bucket 500 is coupled to lift table 10 by coupling brackets 502a, 502b. They welded to both side of the work bucket, and inserted in the upper deck pockets 403a, 403c and bolted by 503a, 503b. The front edge of work bucket 500 is welded to bracket 501 (FIGS. 1K and 1L) and inserted to support plate channel 43, then locking by support plate channel locked 61. It can be operated to function similarly to FIGS. 2A and 2B. FIG. 5B can be elevated, load or unload to the truck bed . The work bucket allows you to lower to the floor level, and let you low load on an off. It is designed to position containers with a part within fingertip and reach the assembly line. Workers and machine operator also can eliminate bending and stretching that is required to

In the embodiments depicted in FIGS. 6A and 6B lift table 10 is lowered to the floor level. The extensible device 40 attached to platform frame and upper cross bar 42b. The head rest 600 is coupled to deck 11 by coupling pins and holes 601a, 601b. Inserting in to the upper deck. The mechanic's creeper works as a seat support. A worker can set the tool box at the same time, also elevate the tool box at a desired level for working condition. It is convenient with a remote control and useful for a business or at home. It can be inclined or angle raised to support the worker when working in a face down position to or reach where it's hard to get at. It's easy to adjust it high when you work.

In the embodiments of FIGS. 6C and 6D lift table 10 is used as a floor jack. Position. FIG. 6C shows the lift table 10 is lowered to the floor level. The extension 610 is inserted between the lift arm 32b or lift arm 23 in FIG. 1G and uses a top portion of extension 610 to elevate and lift the frame of a vehicle. A floor jack can be remove the lift arm assembly from cross bar bracket 34c, 34d by removing pin 611 from the ball joint 24, 26, 38a, 38b. A floor jack of the type typically employed for automotive repair work that can load and unload automotive parts, spare tires, raise and angularly align transmission with engine. A floor jack can perform in two functions by used extension 610 lift the vehicle with load on deck at the same time. Also is portable, foldable, and light weight and can fit in the car or trunk.